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ABSTRACT OF THE INVENTION

A resist film is formed by applying, on a substrate, a pattern formation material containing a polymer including a first unit represented by Chemical Formula 1 and a second unit represented by Chemical Formula 2, and an acid generator:

Chemical Formula 1:

$$-(-CH_2-C)$$
 $-(-CH_2)_m$
 $F_3C-C-CF_3$
OH

Chemical Formula 2:

$$-CH_2-C$$
 R_2
 CH_2-C
 R_3

wherein R_1 and R_2 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 is a protecting

group released by an acid; and m is an integer of 0 through 5.

Subsequently, the resist film is irradiated with exposing light of a wavelength shorter than a 180 nm band for pattern exposure, and a resist pattern is formed by developing the resist film after the pattern exposure.